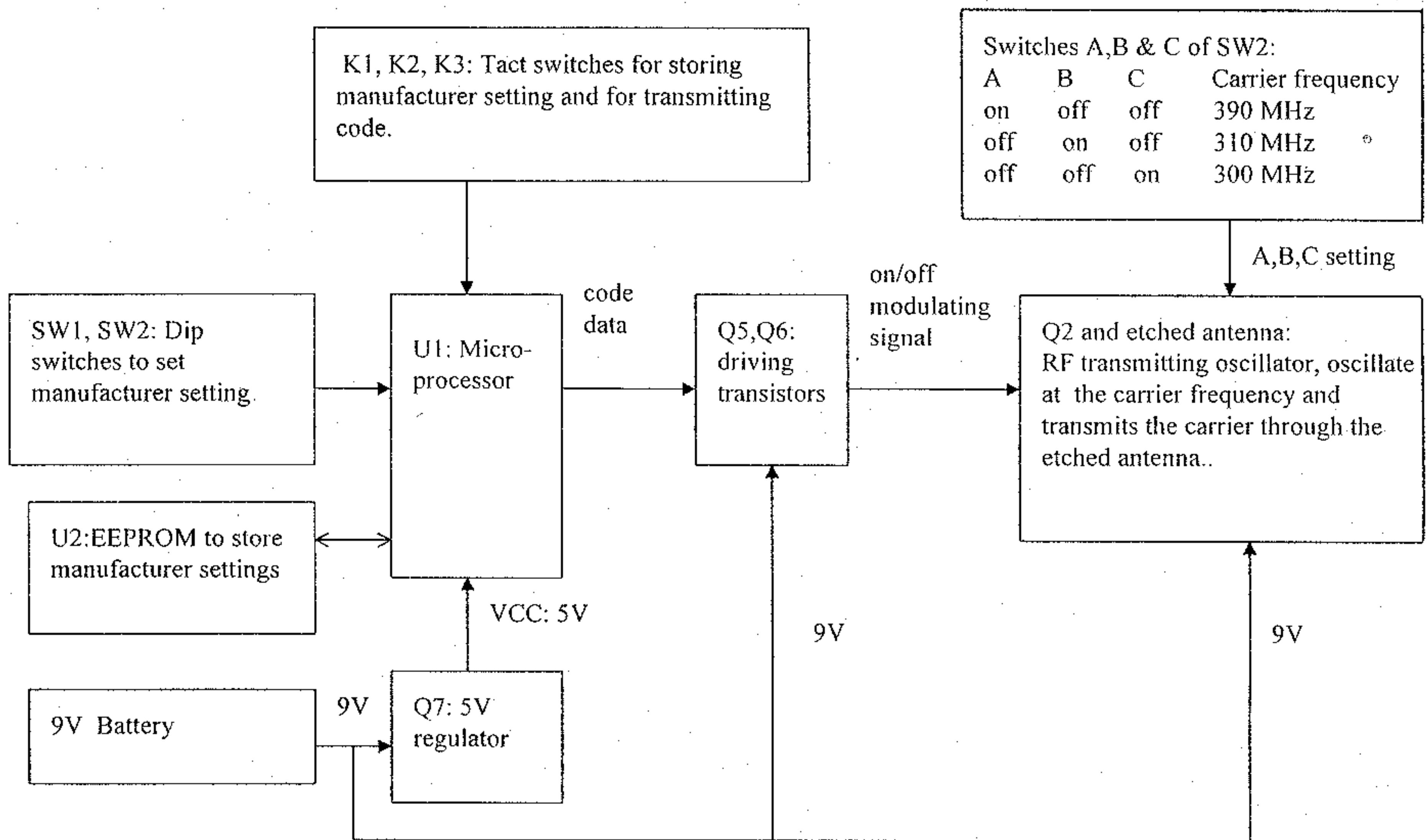


TECHNICAL DESCRIPTION FOR BW2100



The circuit mainly contain the above functional blocks. U1 is the micro-controller that response to key pressed and then either transmit RF radiation or store the dip switches configuration into EEPROM (U2). Please read the user manual before reading further.

Before using, the user will select the manufacturer and frequency of radiation by properly setting the dip switches SW1 and SW2. He will then store the setting into the EEPROM by pressing the "store" button together with the key (key 1 or 2) that he wants to store.

When the user pressed K1 or K3 for transmission, the micro-controller will send the correct code (according to the manufacture stored) to the RF amplifier Q2 through Q5 and Q6 drivers. Q5 and Q6 simply acts as a level shifter that shift the 5V output from U1 to a 9V output. When Q5 is on and Q6 is on, a 9V drive will be applied to the base of Q2 through R8 and L8. Hence Q2 will be turned on and oscillation starts. C28, L8, Q2, L7, C19, L1, C33 and VC1 (2 or 3) constitute an RF oscillator which oscillates when bias is applied to Q2. L1 and VC1(2 or 3) constitute the tank circuit that determine the frequency of oscillation. SW A of SW1 will select VC1 which will cause a 390mhz oscillation. SW B and SW C will cause a 310mhz and 300mhz oscillation respectively. L1 also acts as a loop antenna (PCB etched) that radiate RF out of the transmitter. Therefore Q2 will be either in "off" state (no carrier) or in "on" state (radiate carrier). These two states correspond to the logic "0" and "1" of the code sending. Hence the transmitter only works under "on/off" keying. However logic "0" could also be represented by a baseband modulating signal of 10khz and logic "1" by 20 Khz. This happened when selecting code 1 or 2. This is so called baseband FSK.

Remotec	MODEL BW2100	Released for	PRELIMINARY INFORMATION	QUOTATION ONLY	MOCK UP ONLY	HARD/SOFT TOOLING	POOL MODIFICATION	TECHNICAL MANUAL	MANUFACTORY	PRINTING/ITS	Prepared by <i>Stefan</i>	Date: <i>10/4/98</i>	Approved by <i>[Signature]</i>	Date: <i>1/14/98</i>